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PEOPLE AND SYSTEMS FOR WATER, SANITATION AND HEALTH

Assessing sustainability – the sustainability snap shot

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MANY ORGANISATIONS WORKING in the water sector aim and claim to be providing sustainable water points. In practice, the ability of a community to keep a water point operational over a long period of time is a complex mix of managerial, social, financial, and technical issues and the capabilities of the institutions and infrastructure designed to support the community. To make matters more complex, each of these elements are often inter-linked and inter-dependent.

Much work has been carried out on improving and standardising hand pumps and this has no doubt led to improvements in the number of breakdowns which occur and the ease with which they can be repaired. The same effort however has not been made to understanding the complexities of community based management and the non-technical reasons that results in water point failure.

The issue of assessing the sustainability of a project's work was the subject of a series of community visits and discussions at a WaterAid regional meeting in Ghana. The visits highlighted a range of issues and barriers that could potentially result in a hand pump failing and the community having to return to their original source of water. During the process of analysis it became apparent that whilst there was a high degree of consensus regarding the sustainability of the hardware, there was no framework on which to base the analysis and no method of assessing the barriers that would make maintenance difficult and unlikely.

This initiated a piece of work within WaterAid aimed at developing a framework that would allow people to think more clearly about the sustainability of their work, which in turn would lead to improved programme effectiveness. It is intended to be an attempt to find a solution, rather it is an attempt at highlighting the fragile areas within the communities and support infrastructure that may lead to the non-sustainability of handpumps. For such a system to work it was decided that it had to be:

- easy to understand and use;
- quick;
- discussion provoking;
- applicable to all circumstances;
- non-prescriptive; and
- flexible in exceptional circumstances.

The first attempt

The first step was to make a list of the key aspects that could adversely effect the long term operation and maintenance of a water point. This list included :

- Prohibitive maintenance costs;
- Poor money collection system for handpump maintenance;
- Poor water point usage;
- Poor water quality, quantity, accessibility;
- Water point reliability and attitude towards alternative sources;
- Spare parts cost and availability;
- Water extraction technology options available;
- Lack of sense of feeling of responsibility toward the water point;
- Lack of role for committees once project implementation completed;
- Poor level of community decision making in project implementation;
- Lack of women involvement at community level; and
- Divisions with the community regarding ownership and use of water point.

The next step was to produce a continuum ranging from worst possible scenario to best possible scenario for each of these aspects with the incremental improvements being described by a short simple phrase. The table below is an example of the continuum produced with respect to the awareness within the community of the need to collect money to cover the maintenance costs of their water point.

Hand pump maintenance costs

1. All committee members unaware that they had to pay for operation and maintenance.
2. Some committee member unaware that they had to pay for operation and maintenance.
3. Some community members aware they had contribute to operation and maintenance.
4. Committee have vague knowledge of cost of spare parts
5. Majority of community members aware they had contribute to operation and maintenance.
6. All community members aware they had contribute to operation and maintenance.
7. Committee have accurate knowledge of cost of spare parts.
8. Majority of community members aware of approximate cost of spare parts.
9. Committee aware of long-term financial costs of handpump maintenance .
10. Community aware of long-term financial costs of handpump maintenance.

The idea was that the partner staff would be able to evaluate the communities in their project and decide which of the phrases in a particular continuum was applicable. With the knowledge of where their communities were placed on the whole range sustainability issues, the project staff would be able to clearly identify the weaknesses and redesign their approach accordingly.

In practice, it was found that the sustainability continuums were difficult to produce and often resulted in convoluted and ambiguous sentences. The end result was also thought to be too prescriptive and not particularly easy to understand or use.

The second attempt

The whole process had to be made simpler, broader and less prescriptive, without devaluing or diluting the complexity of the factors that make a water point sustainable.

This was eventually achieved by breaking the phrases that made up the continuums into more general classifications. For example, the community finance aspect of hand pump maintenance was divided into the three following simple phases -

Financing hand pump repairs

1. No funds available for maintenance when needed.
2. Fund available but not sufficient for the most expensive maintenance process.
3. Fund available and sufficient for the most expensive maintenance process.

The process of the project staff evaluating which phase was most relevant to their situation was still to be used, but this time it was thought that the broadness and smaller range of possible phases would make the system easier to use and applicable to a wider variety of situations.

As with all theoretical work, there was always some doubt about the practically of the process and how useful project staff would find the exercise. To gain a better understanding of this it was agreed to first test the process in the WaterAid programmes in Zambia, Malawi and Mozambique and if this proved successful, expand it to all the WaterAid programmes in Africa.

To keep it simple the field testing process only concentrated on the issues surrounding the ability of the community to finance maintenance, the availability of trained persons to carry out repairs and the availability of spare parts and equipment. The other issues would follow if the initial trial phase proved to be successful. In order to make the system more accessible to a first time user, the process was divided into three stages, a quick evaluation, a justification for the classification and an assessment of what can be done to improve sustainability.

The whole process was entitled ' The Sustainability Snap-Shot' in order to emphasise that the sustainability of a water point is dynamic; that it is changeable and that it can vary with time and from community to community.

The findings

The facilitators of the snap shot process within the WaterAid programmes found that the system gradually drew the participants into thinking more deeply about the issues surrounding the sustainability of their work. By focussing on sustainability, issues such as the weaknesses of community financing systems came to the fore of the debate, ahead of, rather than behind, the usual issues regarding the hardware. The box below contains some examples, drawn from the results of the participating Country Programmes, of the responses to the question: – What do you think you need to do differently? They clearly reflect concerns over the social, financial and managerial aspect of water point sustainability.

Box 1. What do you think you need to do differently?

- Village pump attendants to be trained to the level of attending major repair with little or no support from the district level.
- Designing considering other demands like livestock so that we can tap more money from the livestock keepers particularly during dry season (when there is no other water source).
- Encourage use of private operators to manage the operation and maintenance of the scheme as it has proven to work in some of the villages.
- Help communities to set the appropriate water tariffs that will vary with income and at the same time meet the 0 & M and replacement cost.
- The main hurdle to overcome is community confidence in the management of funds. It is normal for there to be no trust that someone won't run off with the money.
- Ensure that income-generating elements are included in project or that micro-credit facilities are available to communities.
- Establish a viable spare parts supply system at the district level and extend this to catchment level; incorporate local businesses in this system rather than base it around the D-WASHE Committee/Council.

The following 'Snap-shot' form was sent out to all the WaterAid Country Programmes in Africa to test it acceptability and usefulness.

The Sustainability Snap Shot

STAGE ONE

The aim of stage one is to undertake a quick evaluation of a communities ability to maintain the various types of water point your programme/project is installing.

Complete this 'sustainability' grid for each type **of water point** with reference to the description below

Project name:				
Technology	Hand Dug Well with Pump	Hand Dug Well with no pump	Borehole with handpump	
Financial Technical skills Spare and equipment				

Financial

Which of the following is applicable to the type of water point in question

1. No funds available for maintenance when needed
2. Fund available but not sufficient for the most expensive maintenance process
3. Fund available and sufficient for the most expensive maintenance process

Technical skills

Which of the following is applicable to the type of water point in question

1. Technical skills not available for maintenance when needed
2. Some technical skills for maintenance, but not for all.
3. Technical skills for all maintenance processes available

NB : Available in this context means available to an average community member within a reasonable time

Equipment and spare parts

Which of the following is applicable to the type of water point in question

1. Not available when needed
2. Available but not for all repairs
3. Available for all repairs

STAGE TWO – COMMENTS

Given your above ranking, can you give a brief explanation of the reasons why you allocated such a score.

STAGE THREE - THE WAY FORWARD

Answer these questions -

- Is it reasonable to aim for 3's in all your examples above?
- What do you think you need to do differently to achieve '3's?
- Is this possible?

If you have a series of '3s' or if you have moved recently from a 2 to a 3, have you documented this process?

The results are encouraging and give a clear indication that the process did generate useful discussion regarding the sustainability of their work. If this process results in just some of these ideas being implemented the impact of such a simple process on the sustainability of community water points could be significant.

On the snap-shot process itself

All the participating programmes gave positive responses regarding the ease and usefulness of this 'beguilingly simple' three stage process and many found it a useful tool in focussing attention on the issue of sustainability as opposed to hardware or implementation processes. Comments were made about how the process made them think more closely about the design of projects and that they were now considering how to implement the findings.

One participating country programme commented -

"Everyone thought the exercise useful for us and applicable for discussions with partners - indeed after we concluded one of the Advisors was busily photocopying the form to take back to his district to run the same session with the District Water and Sanitation Committee members"

Conclusion

The sustainability snap shot assessment tool proved to be useful, easy-to-use, discussion provoking and applicable to the circumstances in which it was tested. WaterAid will continue to develop this ground breaking process over the coming years and cover the whole range of issues affecting sustainability of water supply, sanitation, hygiene promotion and delivery organisations. This in time should enable WaterAid to develop an organisational position on the sustainability of its projects and allow for better sharing of experiences and lesson learning.

In the future it could provide a simple evaluation tool and be capable of improving the design of projects by looking more closely at "what we are seeking to achieve through a project intervention".

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